AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph from lines 2-11 in page 4 of the specification as follows:

According to one aspect of the present invention a method is disclosed for

generating and searching an optimal likelihood decision tree (OML-DSCTree) for hidden

markov model (HMM) based speech recognition. For one embodiment, speech signals

are received. The received speech signals are processed to generate a plurality of

phoneme clusters. The phoneme clusters (e.g., biphone or triphone clusters) are grouped

into a first cluster node and a second cluster node according to their answers to phonetic

context questions. A determination is made if a phoneme cluster in the first cluster node

is to be moved into the second cluster node based on a likelihood increase of the

phoneme cluster of the first cluster node from being in the first cluster node to being in

the second cluster node.

Please amend the paragraph from lines 17-25 in page 5 of the specification as follows:

FIG. 2 is a block diagram of a speech processing system 200 according to one

embodiment. The speech recognition system can be implemented, e.g., in digital

processing system 100 as described in FIG. 1. Referring to FIG. 2, block diagram 200

includes an audio/speech device 204 for receiving and processing speech signals 202 and

a signal processor 206 for processing speech signals 402 202 from audio/speech device

204. For one embodiment, signal processor 206 can build an OML-DCSTree as

described in FIG. 4 to be stored as acoustical models 208 in a training process. For

another embodiment, signal processor 206 can use acoustical models 208 (e.g., an OML-

DCSTree) to recognize speech during a speech recognition process.

App. No. 10/019,883 Docket No. 42390P9270 Examiner: SALAZAR Art Unit: 4192 Please amend the paragraph from lines 26-30 in page 5 of the specification as follows:

Audio/speech device 204 is an audio and speech receiving mechanism. For

example, audio/speech device 204 can be a microphone. A user can speak into

audio/speech device $\frac{203}{204}$ in which acoustics (i.e., analog signals) are provided to

audio/speech device 203 204. Audio/speech device 204 can convert the analog signals

(i.e., speech signals 202) into digital form.

Please amend the paragraph from lines 18-22 in page 7 of the specification as follows:

At operation 422, at determination is made if a certain depth is reached for the

decision tree. That is, the above operation is repeated at all levels of the decision tree

until a certain depth of the decision tree is reached. If a certain depth is not reached,

operation 400 finds the next best node to split and continues back at operation 404. If a

certain depth is reached, operation 400 ends.

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